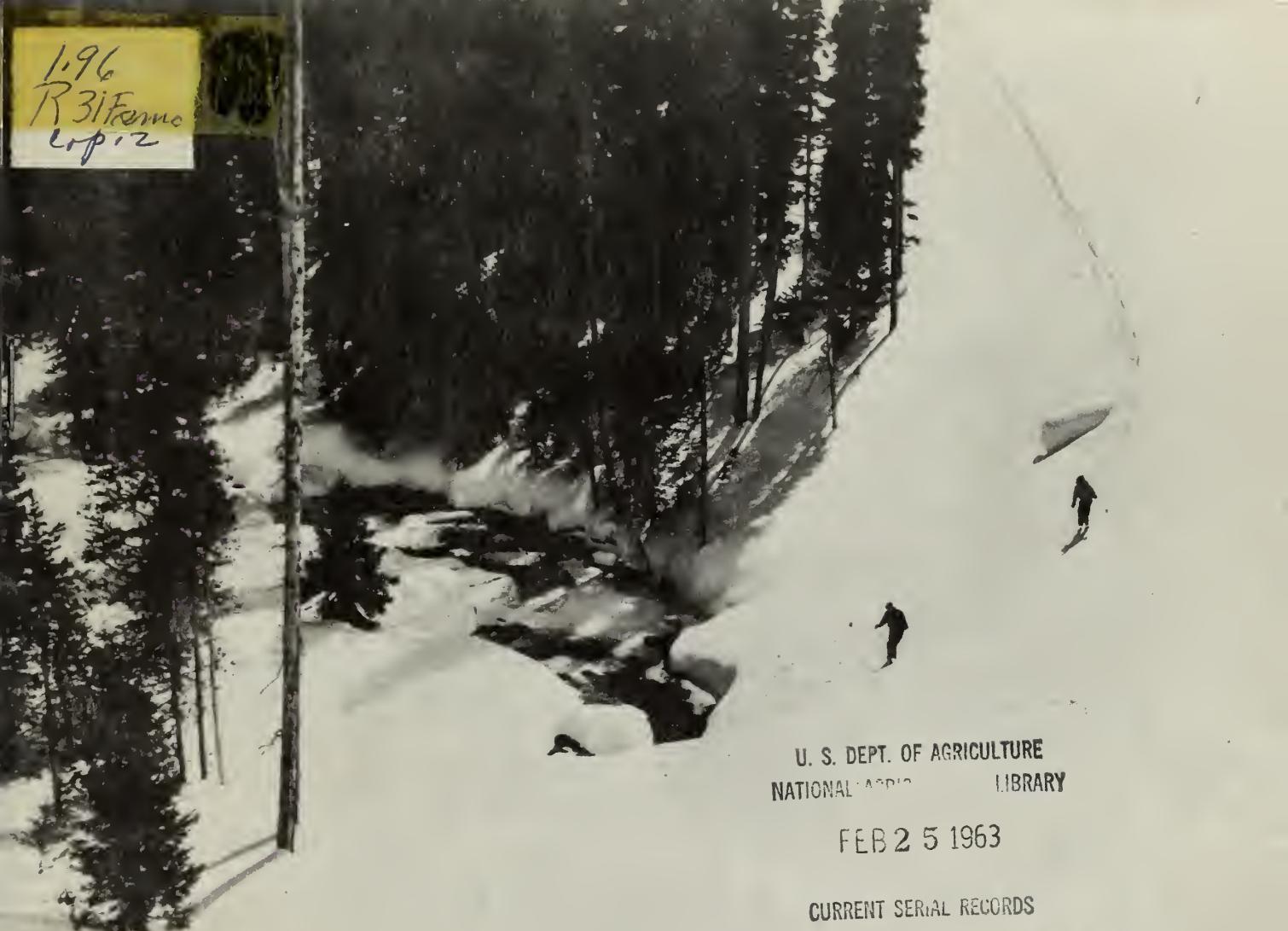


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CURRENT SERIAL RECORDS

WATER SUPPLY OUTLOOK
and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS
for
MONTANA

UNITED STATES DEPARTMENT of AGRICULTURE...SOIL CONSERVATION SERVICE,
and
MONTANA AGRICULTURAL EXPERIMENT STATION

Data included in this report were obtained by the agencies
named above in cooperation with Federal, State and private
organizations listed on the last page of this report

AS OF JAN. 1, 1963

UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

To Recipients of Water Supply Outlook Reports:

The climate of the cultivated and populated areas of the West is characterized by relatively dry summer months. Such precipitation as occurs falls mostly in the winter and early spring months when it is of little immediate benefit to growing crops. Most of this precipitation falls as mountain snow which stays on the ground for months, melting later to sustain streamflow during the period of greatest demand during late spring and summer. Thus, nature provides in mountain snow an imposing water storage facility.

The amount of water stored in mountain snow varies from place to place as well as from year to year and accordingly, so does the runoff of the streams. The best seasonal management of variable western water supplies results from advance estimates of the streamflow.

A snow survey consists of a series of about ten samples taken with specially designed snow sampling equipment along a permanently marked line, up to 1000 feet in length, called a snow course. The use of snow sampling equipment provides snow depth and water equivalent values for each sampling point. The average of these values is reported as the snow survey measurement for a snow course.

Snow surveys are made monthly or semi-monthly beginning in January or February and continue through the snow season until April, May or June. Currently more than 1400 western snow courses are measured each year. These measurements furnish the key data for water supply forecasts.

Streamflow forecasts are obtained by a comparison of total or maximum snow accumulation, as measured by snow water equivalent, to the subsequent spring and summer or snowmelt season runoff over a period of years. The snow water equivalent measured in selected snow courses provides most of the index to the streamflow forecast for the following season. More accurate forecasts are usually obtained when other factors such as soil moisture, base flow and spring precipitation are considered and included in the forecast procedure. Early season forecasts assume average climatic conditions through the snowmelt season.

Listed below are the Federal-State-Private Cooperative Snow Survey and Water Supply Forecast reports available for the West which contain detailed information on snow survey measurements, streamflow forecasts, reservoir storage, soil moisture and other guide data to water management and conservation decisions. Soil Conservation Service Reports may be secured from Water Supply Forecasting Unit, Soil Conservation Service, P.O. Box 4170, Portland 8, Oregon.

PUBLISHED BY SOIL CONSERVATION SERVICE

<u>REPORTS</u>	<u>ISSUED</u>	<u>LOCATION</u>	<u>COOPERATING WITH</u>
RIVER BASINS			
WESTERN UNITED STATES			
	MONTHLY (FEB.-MAY)	PORTLAND, OREGON	ALL COOPERATORS
STATES			
ALASKA	MONTHLY (MAR.-MAY)	PALMER, ALASKA	ALASKA S.C.D.
ARIZONA	SEMI-MONTHLY (JAN. 15 - APR. 1)	PHOENIX, ARIZONA	SALT R. VALLEY WATER USERS ASSOC. ARIZ. AGR. EXP. STATION
COLORADO AND NEW MEXICO	MONTHLY (FEB.-MAY)	FORT COLLINS, COLORADO	COLO. STATE UNIVERSITY COLO. STATE ENGINEER N. MEX. STATE ENGINEER
IDAHO	MONTHLY (JAN.-JUNE)	BOISE, IDAHO	IDAHO STATE RECLAMATION ENGINEER
MONTANA	MONTHLY (JAN.-JUNE)	BOZEMAN, MONTANA	MONT. AGR. EXP. STATION
NEVADA	MONTHLY (JAN.-MAY)	RENO, NEVADA	NEVADA DEPT. OF CONSERVATION AND NATURAL RESOURCES - DIVISION OF WATER RESOURCES
OREGON	MONTHLY (JAN.-JUNE)	PORTLAND, OREGON	OREG. STATE UNIVERSITY OREGON STATE ENGINEER
UTAH	MONTHLY (JAN.-JUNE)	SALT LAKE CITY, UTAH	UTAH STATE ENGINEER
WASHINGTON	MONTHLY (FEB.-JUNE)	SPOKANE, WASHINGTON	WN. STATE DEPT. OF CONSERVATION
WYOMING	MONTHLY (FEB.-JUNE)	CASPER, WYOMING	WYOMING STATE ENGINEER

PUBLISHED BY OTHER AGENCIES

<u>REPORTS</u>	<u>ISSUED</u>	<u>AGENCY</u>
BRITISH COLUMBIA	MONTHLY (FEB.-JUNE)	WATER RIGHTS BR., DEPT. OF LANDS, FORESTS AND NATURAL RESOURCES, PARLIAMENT BLDG., VICTORIA, B.C., CANADA
CALIFORNIA	MONTHLY (FEB.-MAY)	CALIF. DEPT. OF WATER RESOURCES, P.O. BOX 388, SACRAMENTO, CALIF.

WATER SUPPLY OUTLOOK
FEDERAL-STATE-PRIVATE COOPERATIVE SNOW SURVEYS
for
MONTANA

Report Prepared
By
P. E. Farnes
Acting Snow Survey Supervisor

Soil Conservation Service
Snow Survey Section
Box 855, Bozeman, Montana

Issued By

H. D. Hurd
State Conservationist
Soil Conservation Service
Bozeman, Montana

J. A. Asleson
Director
Montana Agricultural
Experiment Station
Bozeman, Montana

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MONTANA
WATER SUPPLY OUTLOOK
as of
January 1, 1963

Snow surveys made near the first of January in the Flathead River basin indicate the water stored in the snow pack is 36 percent of last year and 50 percent of the 1943-57 average.

In the Clark Fork River drainage the snow pack water content is 38 percent of last year and 53 percent average.

One snow course, Gibbons Pass, measured in the Bitterroot drainage is 73 percent of last year and 64 percent average.

East of the Continental divide the snow water content on the headwaters of the Missouri River is 40 percent of last year and 52 percent average.

Four snow courses measured on the Main Stem of the Missouri River have a water content that is 52 percent of last year and 52 percent average.

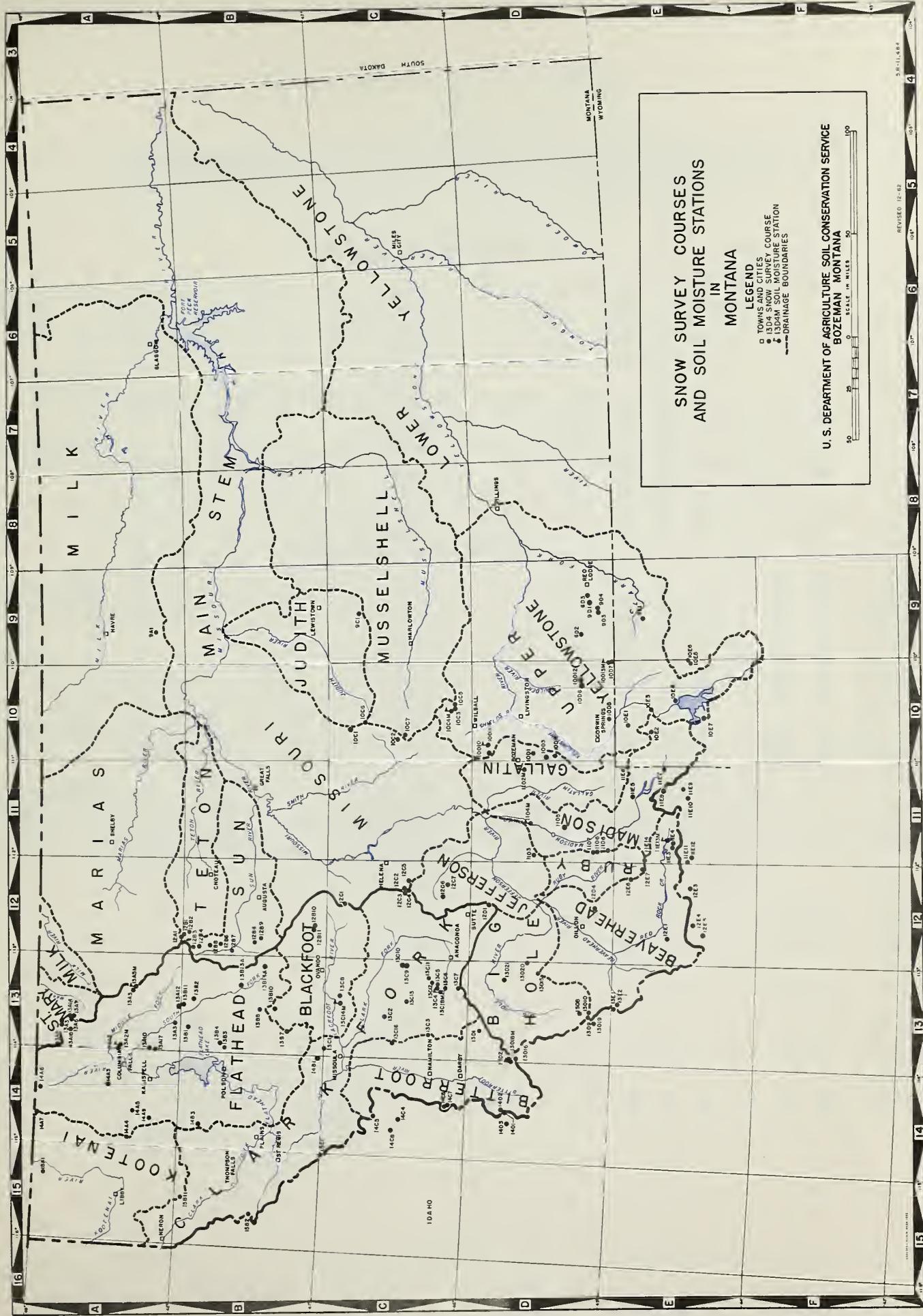
In the Yellowstone River headwaters the snow pack is 46 percent of last year and 61 percent average.

Mountain soil moisture is generally near or above average for this time of year with the exception of extreme northern portion of the State.

Storage in irrigation reservoirs is generally near average with the

exception of the Sun, Marias, Teton and Milk River drainages where storage is slightly below average.





INDEX TO MONTANA SNOW COURSES AND SOIL MOISTURE STATIONS

INDEX TO MONTANA SNOW COURSES AND SOIL MOISTURE STATIONS

Montana Snow Courses and Soil Moisture Stations													
Drainage Basin & Course Name	Number	Location	Sec.	Range	Record	Measuring	Measured	Location	Sec.	Range	Record	Measuring	Measured
		Elev.	Lat.	Twp.	Long.	Began	Dates /	By	Lat.	Long.	Began	Dates /	By
COLUMBIA RIVER BASIN													
KOOTENAY RIVER													
Barree Creek	15B11	5500	6	25N	30W	1937	4,4,5,5 ₂	2					
Brush Creek	14A4	5000	13	30N	26W	1937	3,4,5	1,2					
Red Mountain	15A1	6000	4	36N	29W	1937	3,4,5,5 ₂ ,6	1,2					
Wessel Olvide	14A7	5450	8	37N	24W	1937	3,4,5,5 ₂ ,6	1,2					
FLATHEAD RIVER													
Basin Creek	13B14	5000	11	19N	12W	1951	2,3,4,5	1					
Basco Peak	14B3	5150	11	24N	25W	1960	3,4,5	1,5					
Big Creek	13B3	6750	7	22N	18W	1941	3,4,5	6					
Cam Misery	13A17	6200	20	28N	18W	1942	3,4,5	1,2					
Deer Mountain	13A2	5600	24	19N	19W	1937	1,2,3,4,5	6					
Fatty Creek	13B4	5500	4	22N	18W	1962	3,4,5	1,5					
Griffin Creek Olvide	14A9	5150	11	28N	25W	1960	3,4,5	1,5					
Hall Roaring Olvide	14A3	5770	35	32N	22W	1942	3,4,5,5 ₂ ,6	1					
Holbrook	13B3A	4530	18	21N	13W	1951	2,3,4,5	1					
Ititan	14A6	3365	14	37N	20W	1954	3,4	1					
Logan Creek	14A5	5300	14	30N	24W	1937	3,4,5	6					
Maries Pass	13A5	5250	34	30N	14W	1934	1,2,3,4,5	3					
Mineral Creek	13A16	4000	29	35N	17W	1939	3,4	6					
North Fork Jocko	13B7	6330	3	17N	17W	1941	3,4,5,5 ₂ ,6	1,5					
Quintana Creek	13A13	3800	11	26N	15W	1951	4	1,2					
Spotted Bear Mt.	13B2	5200	23	25N	15W	1928	1,2,3,4,5	1,2					
Strawberry Mt.	13A10	6500	11	28N	15W	1948	3,4,5	1					
Trinkus Lake	13B1	6500	9	25N	17W	1948	3,4,5	1					
Trout Lake	13A12	3600	21	28N	17W	1948	1,2,3,4,5	1,2					
Twiss Creeks	13B11	3580	14	26N	16W	1951	3,4,5	1,2					
Upper Holland Lake	13B5	7000	28	20N	16W	1948	3,4,5	1					
CLARK FORK RIVER													
Black Pine	13C13	7100	23	8N	15W	1959	3,4,5	1					
Copper Creek	12B10	5700	1	15N	9W	1962	3,4	1					
Cotter Mine	12B11	6250	2	15N	9W	1962	3,4	1					
Coyote Hill	13B10	4200	12	18N	16W	1947	1,2,3,4,5	1,2					
El Corral Mine	13C9	7800	23	8N	12W	1949	3,4,5	1					
Free Burn Pass	13C11	8000	12	8N	13W	1957	3,4,5	1					
Gold Creek Lake	13C10	7200	14	8N	12W	1949	3,4,5	1					
Hoodoo Creek	13C1	5200	9	12N	27W	1937	3,4,5	1,2					
Intersagard	13C4	6650	5	5N	13W	1936	2,3,4	4					
Lubrecht Forest #6	13C8	4040	11	13N	14W	1951	1,2,3,4,5	8					
Red Lion	13C12	7000	27	6N	13W	1958	3,4,5	1					
Sleekho Summit	13C3	7250	30	6N	17W	1937	3,4,5,5 ₂ ,6	1					
Slide Rock Mt.	13C7	5100	35	10N	15W	1937	3,4,5	1					
South Cross	13C5	6500	8	5N	13W	1936	2,3,4	4					
Storm Lake	13C7	7780	19	4N	13W	1939	1,2,3,4,5	1					
Stuart Mill	13C6	6500	19	5N	13W	1936	2,3,4	4					
T.V. Mountain	14B1	6800	33	15N	19W	1956	1,2,3,4,5	1					
BITTERROOT RIVER													
Ambrose	13C16	6475	28	9N	18W	1960	3,4,5	1					
East Fork R.S.	13C1	5400	16	29	17W	1937	3,4,5	1					
Gibbons Pass	13D2	7100	4	25	19W	1934	1,2,3,4,5,5 ₂ ,6	1,3					
Leech	13A7	5	5	25	19W	1940	3,4,5	1					
Nez Perce Camp	13D2	5580	18	15	23W	1937	3,4,5	1					
Nez Perce Pass	13D1	6575	25	15	24W	1937	3,4,5	1					
Twin Lakes	14C8	6510	32	5N	23W	1960	3,4,5	1					
SASKATCHEWAN RIVER BASIN													
ST. MARY RIVER													
Iceberg Lake #3	13A3	5600	34	36N	16W	1922	5	3,9					
Josephine Lover #9	13A14	4900	10	35N	16W	1935	5	3,9					
Mount Allen #7	13A7	5700	22	35N	16W	1922	5	3,9					
Flegen Pass #6	13A6	5500	15	35N	16W	1922	5	3,9					
Pteromigen #8	13A8	5800	32	36N	16W	1937	5	3,9					
MISSOURI RIVER BASIN													
FLATHEAD RIVER													
Garrison Mountain	13A2H	5600	24	31N	11W	1956							
Marles Pass	13A5M	5250	34	30N	11W	1950							
CLARK FORK RIVER													
Georgetown Lake	13C15M	6450	6	5N	13W	1962							
Lubrecht Forest	13C14M	4100	11	13N	15W	1961							
BITTERROOT RIVER													
Gibbons Pass	13C10M	7100	4	2S	19W	1962							
MISSOURI RIVER BASIN													
Lekeview	11E13M	6700	23	14S	2W	1962							
MADISON RIVER													
Red Bluff	11D4M	4800	7	3S	1E	1961							
CALUMET RIVER													
College Site	11D2M	4856	18	2S	5E	1956							
YELLOWSTONE RIVER													
Battle Ridge	10D11M	6020	32	2N	7E	1960							
Northeast Entrance	10C13M	7350	33	9S	1E	1962							
Shields River	10C4M	5850	3	4N	10E	1966							
MISSOURI RIVER BASIN													
Berry Meadow	11D8	8600	28	9S	24	1963	3,4,5	1					
Olvide	12E7	7900	14	12S	4W	1963	3,4,5	1					
Notch	12E6	8500	18	15	4W	1963	3,4,5	1					
BIG HOLE RIVER													
Abundance Lake	13Q20	8800	7	3S	12W	1963	3,4,5	1					
Darlene Lake	13Q3	8600	4	8S	16W	1963	3,4,5	1					
Big Hole Springs	13Q15	8000	15	4S	12W	1935	3,4,5	3					
Foolhan	13Q21	8600	14	15	12W	1963	3,4,5	1					
Jahnie Creek	13Q8	7340	25	7S	16W	1948	3,4	1					
RUBY RIVER													
Clover Meadow	11D8	8600	28	9S	24	1963	3,4,5	1					
Olvide	12E7	7900	14	12S	4W	1963	3,4,5	1					
Notch	12E6	8500	18	15	4W	1963	3,4,5	1					
JEFFERSON RIVER													
Berry Meadow	12C7	7300	17	5N	5W	1962	3,4	1					
Picnic Grounds	12C6	6500	10	5									

SOIL MOISTURE DATA

AS OF JULY 1, 1962

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE

COLUMBIA RIVER BASIN

Flathead

13A2M	Desert Mountain	5600	54	8.4	6/29	7.1	-	8.5
13A5M	Marias Pass	5250	54	6.5	6/25	5.2	3.4	5.1

Clark Fork

13C15M	Georgetown Lake	6450	48	8.3	7/5	7.3	-	-
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Bitterroot

13D18M	Gibbons Pass	7100	48	7.1	6/27	6.3	-	-
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MISSOURI RIVER BASIN

Beaverhead

11E13M	Lakeview	6700	48	15.3	6/29	12.8	-	-
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Madison

10D4M	Red Bluff	4800	40	4.7	7/1	1.1	-	-
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Gallatin

11D2M	College Site	4856	54	14.5	6/29	10.1	6.9	9.0
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Yellowstone

10D11M	Battle Ridge	6020	48	15.4	6/29	15.6	9.9	-
10D13M	Northeast Entrance	7350	48	9.4	6/30	8.1	-	-
10C4M	Shields River	5850	48	17.8 1/	6/29	13.8	8.6	-

** Average for period of record

1/ Capacity and previously published revised data.



SOIL MOISTURE DATA

AS OF AUGUST 1, 1962

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE

COLUMBIA RIVER BASIN

Flathead

13A2M	Desert Mountain	5600	54	8.4	8/1	5.1	-	6.6
13A5M	Marias Pass	5250	54	6.5	7/27	3.6	3.0	3.8

Clark Fork

13C15M	Georgetown Lake	6450	48	8.3	8/6	4.4	-	-
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Bitterroot

13D18M	Gibbons Pass	7100	48	7.1	7/30	5.9	-	-
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MISSOURI RIVER BASIN

Beaverhead

11E13M	Lakeview	6700	48	15.3	7/31	9.8	-	-
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Madison

10D4M	Red Bluff	4800	40	4.7	8/3	1.4	1.1	-
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Gallatin

11D2M	College Site	4856	54	14.5	8/3	10.0	4.9	6.9
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Yellowstone

10D11M	Battle Ridge	6020	48	15.4	7/30	10.8	7.2	-
10D13M	Northeast Entrance	7350	48	9.4	8/2	8.7	-	-
10C4M	Shields River	5850	48	17.8 1/	7/30	9.4	6.4	-

** Average for period of record.

1/ Capacity and previously published revised data.



SOIL MOISTURE DATA

AS OF SEPTEMBER 1, 1962

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE

COLUMBIA RIVER BASIN

Flathead

13A2M	Desert Mountain	5600	54	8.4	9/2	4.8	4.4	4.6
13A5M	Marias Pass	5250	54	6.5	8/25	3.2	3.0	3.7

Clark Fork

13C15M	Georgetown Lake	6450	48	8.3	9/4	2.6	-	-
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Bitterroot

13D18M	Gibbons Pass	7100	48	7.1	8/30	5.0	-	-
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MISSOURI RIVER BASIN

Beaverhead

11E13M	Lakeview	6700	48	15.3	8/30	7.0	-	-
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Madison

10D4M	Red Bluff	4800	40	4.7	9/4	1.7	1.1	-
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Gallatin

11D2M	College Site	4856	54	14.5	8/31	8.5	4.0	6.0
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Yellowstone

10D11M	Battle Ridge	6020	48	15.4	8/31	8.3	5.9	-
10D13M	Northeast Entrance	7350	48	9.4	9/3	6.9	-	-
10C4M	Shields River	5850	48	17.8 1/	8/31	7.3	5.9	-

** Average for period of record

1/ Capacity and previously published revised data.



SOIL MOISTURE DATA

AS OF OCTOBER 1, 1962

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE

COLUMBIA RIVER BASIN

Flathead

13A2M	Desert Mountain	5600	54	8.4	10/1	4.0	4.9	5.7
13A5M	Marias Pass	5250	54	6.5	9/27	3.2	3.6	3.8

Clark Fork

13C15M	Georgetown Lake	6450	48	8.3	10/1	2.3	-	-
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Bitterroot

13D18M	Gibbons Pass	7100	48	7.1	9/27	4.5	-	-
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MISSOURI RIVER BASIN

Beaverhead

11E13M	Lakeview	6700	48	15.3	10/2	5.8	-	-
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Madison

10D4M	Red Bluff	4800	40	4.7	10/13	1.2	3.2	-
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Gallatin

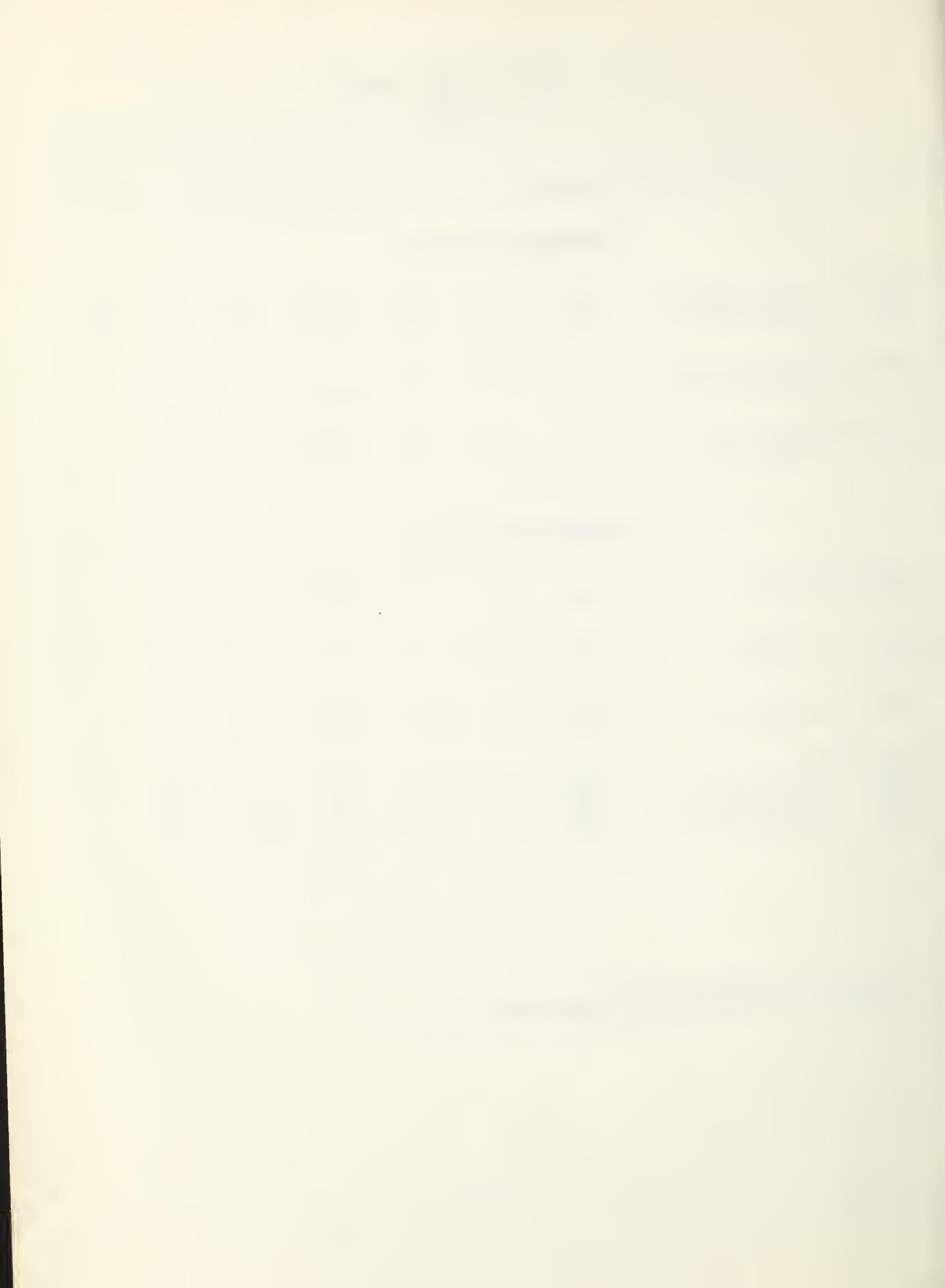
11D2M	College Site	4856	54	14.5	9/28	7.8	9.1	6.4
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Yellowstone

10D11M	Battle Ridge	6020	48	15.4	9/28	7.5	9.3	-
10D13M	Northeast Entrance	7350	48	9.4	9/29	7.5	-	-
10C4M	Shields River	5850	48	17.8 <u>1/</u>	9/28	7.1	7.5	-

** Average for period of record.

1/ Capacity and previously published revised data.



SOIL MOISTURE DATA

AS OF NOVEMBER 1, 1962

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE

COLUMBIA RIVER BASIN

Flathead

13A2M	Desert Mountain	5600	54	8.4	11/1	6.4	-	-
13A5M	Marias Pass	5250	54	6.5	-	-	5.1	4.7

Clark Fork

13C15M	Georgetown Lake	6450	48	8.3	11/7	3.3	-	-
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Bitterroot

13D18M	Gibbons Pass	7100	48	7.1	10/31	6.1	-	-
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MISSOURI RIVER BASIN

Beaverhead

11E13M	Lakeview	6700	48	15.3	10/31	5.8	-	-
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Madison

10D4M	Red Bluff	4800	40	4.7	-	-	2.7	-
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Gallatin

11D2M	College Site	4856	54	14.5	10/26	7.8	9.6	7.4
-------	--------------	------	----	------	-------	-----	-----	-----

Yellowstone

10D11M	Battle Ridge	6020	48	15.4	10/30	13.5	12.7	-
10D13M	Northeast Entrance	7350	48	9.4	11/1	7.7	-	-
10C4M	Shields River	5850	48	17.8 1/	10/30	8.4	7.7	-

** Average for period of record.

1/ Capacity and previously published revised data.



SOIL MOISTURE DATA

AS OF DECEMBER 1, 1962

(inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	** AVERAGE

COLUMBIA RIVER BASIN

Flathead

13A2M	Desert Mountain	5600	54	8.4	-	-	-	-
13A5M	Marias Pass	5250	54	6.5	-	-	5.3	4.9

Clark Fork

13C15M	Georgetown Lake	6450	48	8.3	12/3	3.5	-	-
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Bitterroot

13D18M	Gibbons Pass	7100	48	7.1	11/29	6.1	-	-
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MISSOURI RIVER BASIN

Beaverhead

11E13M	Lakeview	6700	48	15.3	11/30	5.5	-	-
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Madison

10D4M	Red Bluff	4800	40	4.7	11/24	2.1	-	-
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Gallatin

11D2M	College Site	4856	54	14.5	11/30	11.8	10.1	8.4
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Yellowstone

10D11M	Battle Ridge	6020	48	15.4	11/30	14.4	13.2	-
10D13M	Northeast Entrance	7350	48	9.4	12/1	7.5	-	-
10C4M	Shields River	5850	48	17.8 1/	11/30	8.6	11.6	-

** Average for period of record.

1/ Capacity and previously published revised data.



SOIL MOISTURE DATA

AS OF JANUARY 1, 1963

(inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	** AVERAGE

COLUMBIA RIVER BASIN

Flathead

13A2M	Desert Mountain	5600	54	8.4	12/28	6.8	-	6.7
13A5M	Marias Pass	5250	54	6.5	12/30	5.5	5.6	4.7

Clark Fork

13C15M	Georgetown Lake	6450	48	8.3	12/27	3.3	-	-
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Bitterroot

13D18M	Gibbons Pass	7100	48	7.1	12/28	5.9	-	-
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MISSOURI RIVER BASIN

Beaverhead

11E13M	Lakeview	6700	48	15.3	12/31	5.5	-	-
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Madison

10D4M	Red Bluff	4800	40	4.7	1/4	2.6	2.8	-
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Gallatin

11D2M	College Site	4856	54	14.5	12/28	12.3	10.7	8.3
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Yellowstone

10D11M	Battle Ridge	6020	48	15.4	12/31	13.8	13.0	-
10D13M	Northeast Entrance	7350	48	9.4	1/2	7.2	-	-
10C4M	Shields River	5850	48	17.8 <u>1/</u>	12/31	9.2	11.8	-

** Average for period of record.

1/ Capacity and previously published revised data.

SNOW SURVEY DATA

AS OF JANUARY 1, 1963

(inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	AVERAGE
			LAST YEAR				

COLUMBIA RIVER BASIN

FLATHEAD RIVER

13A2	Desert Mountain	5600	12/28	18	4.0	9.5	6.4*
13A5	Marias Pass	5250	1/3	23	5.8	9.9	8.1
13A13	Quintonkon	3800	1/2	7	1.8	9.4	-
13B2	Spotted Bear Mt.	7000	1/3	16	3.3	9.4	7.7*
13A12	Trout Lake	3600	1/2	12	2.8	10.4	7.7*
13B11	Twin Creeks	3580	1/2	6	1.5	8.4	5.3*

CLARK FORK RIVER

13B10	Coyote Hill	4200	12/31	9	1.2	8.2	5.0*
15B2	Lookout	5250	12/28	33	9.0	22.9	16.4*
13C8	Lubrecht Forest #6	4040	12/31	0	0	4.4	1.5*
13C7	Storm Lake	7780	12/27	23	5.6	6.3	6.6*
13C1	Stuart Mountain	7400	12/28	26	7.4	-	-
14B1	TV Mountain	6800	12/29	18	4.0	11.3	8.3*

BITTERROOT RIVER

13D2	Gibbons Pass	7100	12/28	30	8.1	11.0	12.7*
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SNOW SURVEY DATA

AS OF JANUARY 1, 1963

(inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	
						LAST YEAR	AVERAGE

MISSOURI RIVER BASIN

BEAVERHEAD RIVER

12E3	Camp Creek	6800	12/28	11	2.2	5.0	4.2*
11E12	Kilgore	6200	12/28	9	2.1	6.1	4.6*

JEFFERSON RIVER

12D1	Pipestone Pass	7200	12/28	13	3.0	2.8	2.7*
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MADISON RIVER

11E9	Big Springs	6500	12/30	15	3.2	13.5	8.2
11E5	Hebgen Dam	6550	1/2	11	2.2	5.6	5.9
11E10	Island Park	6315	12/30	14	3.0	10.2	6.3
10E2	Norris Basin	7500	1/2	15	3.1	5.4	4.6*
11E8	Valley View	6500	12/30	21	4.7	9.0	5.8
11E7	West Yellowstone	6700	1/2	12	2.3	6.2	5.7

GALLATIN RIVER

11E6	Twenty-One Mile	7150	1/2	17	3.6	10.3	8.6
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MISSOURI MAIN STEM

12C5	Chessman Reservoir	6200	1/4	3	0.5	1.9	2.2
12C2	Tenmile, Lower	6250	1/4	8	1.9	3.7	3.5
12C3	Tenmile, Middle	6800	1/3	15	3.4	5.4	5.3
12C4	Tenmile, Upper	8000	1/3	17	4.4	6.8	6.7

UPPER YELLOWSTONE RIVER

10E3	Canyon	7750	1/3	20	4.3	8.6	6.3*
10D7	Cooke City	7400	1/2	14	3.0	4.8	4.0*
10E6	East Entrance	7000	12/31	16	2.5	6.0	4.7*
9D5	Grizzly Peak	8400	12/28	26	6.0	15.0	-
10E4	Lake Camp #2	7850	12/31	12	2.0	5.8	4.5*
10E1	Lupine Creek	7300	1/2	17	3.0	8.1	5.1*
10E5	Sylvan Pass	7100	12/31	18	3.9	7.5	6.5*
10E7	Thumb Divide	7900	12/31	25	6.6	14.7	10.2*

RESERVOIR STORAGE DATA

AS OF DECEMBER 31, 1962

(1000 Acre Feet)

BASIN	RESERVOIR	USEABLE CAPACITY	USEABLE STORAGE		
			THIS YEAR	LAST YEAR	AVERAGE

COLUMBIA RIVER BASIN

Flathead	Hungry Horse	3,428.0	3,155.0	2,992.0	2,883.0**
	Flathead Lake	1,791.0	1,610.0	1,367.0	1,257.1
	Camas 1/	45.2	24.8	25.4	23.8
	Mission Valley 2/	100.3	25.1	20.8	28.2
Clark Fork	Georgetown Lake	31.0	27.7	26.0	25.3
	Noxon	334.6	331.3	325.0	-
Bitterroot	Como	34.9	15.0	-	9.3

MISSOURI RIVER BASIN

Beaverhead	Lima	84.0	N.R.	-	32.4
Ruby	Ruby	38.8	N.R.	16.2	22.7**
Madison	Hebgen Lake 3/	384.8	233.6	106.8	240.3
	Ennis Lake	41.0	39.4	39.3	37.6
Gallatin	Middle Creek	8.0	4.1	2.0	3.1**
Missouri	Canyon Ferry	2,043.0	2,015.0	1,382.0	1,682.0**
	Hauser & Helena	61.9	53.6	52.0	54.9
	Lake Helena	10.4	7.6	7.0	8.3**
	Holter Lake	81.9	73.0	67.1	71.6
	Smith River	10.7	7.3	1.6	5.0**
	Ackley Lake	5.8	N.R.	1.6	3.9
	Durand	7.0	5.3	0.8	4.3
	Martinsdale	23.1	8.9	1.3	9.5
	Deadman's Basin	72.2	42.1	4.8	48.5**
	Fort Peck	19,410.0	10,040.0	8,820.0	11,061.0
Sun-Teton	Gibson	105.0	33.6	34.0	55.5
	Willow Creek	32.3	25.5	10.3	18.4
	Pishkun	32.0	18.5	17.4	19.0
Marias	Lower Two Medicine	16.6	N.R.	0	0
	Four Horns	19.2	N.R.	14.0	8.6
	Swift	30.0	8.6	13.5	18.1
	Lake Francis	112.0	65.9	74.8	94.4
	Tiber	1,313.0	625.5	619.0	626.2**
Milk	Fresno	127.2	36.1	15.9	66.6
	Nelson	66.8	48.3	16.8	37.2
	Lake Sherburne	66.1	N.R.	13.0	16.3
Yellowstone	Mystic Lake	20.8	14.7	13.4	14.5
	Tongue River	68.0	N.R.	39.9	7.9
	Cooney	27.5	15.0	15.0	8.8

1/ Sum of four small reservoirs on west side of Flathead Lake.

2/ Sum of eight small reservoirs in Mission Valley not including Jocko Lake.

3/ New capacity curve.

**Agencies Cooperating in Collecting Data Contained
in this Bulletin**

U. S. Forest Service
Region I, Missoula, Montana

U. S. Geological Survey
Helena, Montana

U. S. Army Corps of Engineers
Portland, Oregon
Seattle, Washington
Omaha, Nebraska
Riverdale, N. D.

U. S. Indian Irrigation Service
St. Ignatius, Montana

U. S. Weather Bureau
Helena, Montana

U. S. Fish & Wildlife Service
Red Rock Lakes Refuge
Monida, Montana

U. S. Bureau of Reclamation
Billings, Montana
Boise, Idaho

Montana Power Company
Butte, Montana

Agricultural Experiment Station
North Montana Branch Station
Havre, Montana

State Water Conservation Board
Helena, Montana

National Park Service
Yellowstone National Park
Glacier National Park

Montana Experiment Station
Montana State College
Bozeman, Montana

Bonneville Power Administration
Portland, Oregon

Montana State School of Forestry
Montana State University
Missoula, Montana

Soil Conservation Service
Montana, Wyoming, Idaho

Soil Conservation Districts
Montana Counties

Johnson Flying Service, Inc.
Missoula, Montana

Water Rights Branch
Dept. of Lands & Forests
Victoria, British Columbia

Department of Northern Affairs
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Calgary, Alberta

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